1 Quick Setup
This section briefly describes how to install your Repeater/Cross-Repeater system. Unless you are an experienced user, we recommend that you follow the full procedures described in the rest of this manual. You can download the manual on: http://www.ihseusa.com.

2 Installation
For first-time users, we recommend that you carry out a test placement, confined to a single room, before commencing full installation. This will allow you to identify and solve any cabling problems, and experiment with the Repeater/Cross-Repeater more conveniently.

2.1 Package Contents
You should receive the following items in your extender package (all types):
- Repeater/Cross-Repeater
- 5V DC universal power supply
- German type power cord
- User manual (Quick Setup)
If anything is missing, please contact Technical Support (see Appendix F – Calling Technical Support).

3 Device Views (depending on device type)

3.1 Device Views

4 Service Setup
For most applications, you shouldn't need not to make any adjustments to set up your Repeater/Cross-Repeater. Under some special circumstances it could be necessary to setup configuration specials.

For some applications, you may need to open the Local Unit and/or the Remote Unit. Unscrew the Philips-type screws at both sides at the bottom of the device. Unscrew the UNC type screws at both sides of the monitor connectors. Carefully displace the lower and upper shells of the case.

2.2 System Setup
To install your Repeater/Cross-Repeater system:
1. Switch off all devices.
2. Connect the interconnect cable to the INTERCONNECT socket(s) of the Local Unit and the Repeater/Cross-Repeater
3. Connect the interconnect cable to the INTERCONNECT socket(s) of the Remote Unit and the Repeater/Cross-Repeater
4. Connect the 5V power supply unit to power the unit.

Only use the power supply originally supplied with this equipment or a manufacturer-approved replacement.

5. For a dual head system, connect in the same way like described under 2. and 3. the CATx/Fiber cables for the secondary monitor.
6. Power up the system

3.2 Diagnose
Each Repeater/Cross-Repeater is fitted with three indicator LEDs: Power, Data Error, Link Status. The Power LEDs are next to the Power socket.

The location of the LEDs is shown below:

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**Diagnose- LEDs at the Repeater/Cross-Repeater**

<table>
<thead>
<tr>
<th>LED</th>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power LED (Red LED)</td>
<td>Off/On</td>
<td>Device not ready/Device ready</td>
</tr>
<tr>
<td>Link Status (Green LED)</td>
<td>Blinking/On</td>
<td>No INTERCONNECT connection via CATx/Fiber cable/Device ready</td>
</tr>
<tr>
<td>Data Error (Green LED)</td>
<td>On</td>
<td>Indicator LED actually without function</td>
</tr>
</tbody>
</table>
4.1 Setup at the Repeater/Cross-Repeater

After unscrewing and opening the upper shell, please place the device in this orientation: with the CATx/fiber connectors to the left and the fiber connectors to the right (eventually not equipped with GBICs).

The main PCB then will look like this:

Use the diagram to locate jumpers.

4.1.1 Operating mode Repeater or Cross-Repeater

If you want to alter the mode of operation after the date of purchase, e.g. from Repeater to Cross-Repeater or vice versa, you need (probably) to install optical Transceiver (GBICs) and reconfigure the device.

<table>
<thead>
<tr>
<th>Operating Mode</th>
<th>JP1</th>
<th>JPA B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repeater or Fiber- Cross-Repeater</td>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>CATx/Fiber Cross-Repeater</td>
<td>2.</td>
<td></td>
</tr>
</tbody>
</table>

4.1.2 Operating mode Dual-Head Cross-Repeater

If you want to alter the mode of operation after the date of purchase, e.g. to use it as a Dual-Head Cross-Repeater, you need (probably) to install optical Transceiver (GBICs) and reconfigure the device.

<table>
<thead>
<tr>
<th>Operating mode</th>
<th>JP1</th>
<th>JPA B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dual-Head Cross-Repeater Local CATx</td>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>Dual-Head Cross-Repeater Remote CATx</td>
<td>4.</td>
<td></td>
</tr>
</tbody>
</table>

4.2 Installation instruction

Basically you need to pay attention to attach at connectors marked with "A" only cables which link to a Local Unit and to attach at connectors marked with "B" only cables which link to a Remote Unit.

4.2.1 CATx or Fiber Repeater, Multimode/Singlemode Cross-Repeater

The Local Unit is connected via CATx (Fiber) connector A, the Remote Unit is connected via CATx (Fiber) connector B.

4.2.2 CATx / Fiber Cross-Repeater

The Local Unit is connected via CATx (Fiber) connector A, the fiber connector B is connected to the fiber connector A of the second Repeater. The Remote Unit is connected via CATx (Fiber) connector B.

4.2.3 Dual-Head Cross-Repeater

The Cross-Repeater look the same for the Local and the remote placement. Because of internal jumper settings the data direction is fixed. Please note to install the device, marked with „Cross Repeater Local CATx“ at a position where the CATx cable link to the Local Unit and the device, marked with „Cross Repeater Remote CATx“ at a position where the CATx cable link to the Remote Unit.

Repeater/Cross-Repeater

Typ:
K471-CT 1.
K471-MM 1.
K471-SS 1.
K471-CM 2.
K471-CS 2.
K471-MS 1.
K471-DM 3./4.
K471-DS 3./4.

(Quick Setup)

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